UNITED TECHNOLOGIES PRATT&WHITNEY

400 Main Street
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August 17, 1989

Mr. George Dews
Senior Sanitary Engineer
Hazardous Waste Management Section
Department of Environmental Protection
165 Capitol Avenue
Hartford, CT 06106

Mr. Stephen Yee
Environmental Engineer
Waste Management Division
US EPA
90 Canal Street - 3rd Floor
Boston, MA 02114

Re: **Letter Addendum to the Burn-Zol Hazardous Waste Incinerator Closure Plan**
UTC - Pratt & Whitney East Hartford, CT
EPA ID # CT D990672081

Dear Sirs:

Pratt & Whitney is pleased to submit a letter addendum to the latest submittal of the Burn-Zol Hazardous Waste Closure Plan. This addendum was requested in a joint comment letter from EPA/DEP dated August 1, 1989. We have responded to each agency comment in sequence as presented below:

COMMENT 1

The proposed analytical parameter list for environmental sampling is presented as Table 2 in Section 11.0 of the closure plan. We believe that this list represents all of the Appendix VIII constituents potentially present in either the wax/solvent or the cyanide waste streams. It should be emphasized that these two waste streams were the only wastes incinerated during the final burns.

The parameter list was developed based on a review of waste stream analytical data (Appendix C of the closure plan), and the applicable process solutions that, upon disposal, constitute the subject waste streams. A discussion of each waste stream is presented below.

Wax/Solvent Mixture

The wax/solvent mixture waste stream is generated during the cleaning of machine parts in which selected areas are covered by a

film of wax. The wax is removed in a solvent dewaxing operation and the resulting wax/solvent mixture is periodically removed to a solvent reclamation area. Material that cannot be reclaimed is collected and stored as a hazardous waste at Pratt & Whitney's Concentrated Waste Treatment Plant (CWTP).

The two solvents utilized during the dewaxing operation are tetrachloroethylene and 1,1,1-trichloroethane. A review of available material safety data sheets (MSDSs) for these solvents and the wax resulted in identifying no Appendix VIII constituents beyond the analytical parameter proposed in the closure plan. Copies of the applicable MSDSs are presented as Attachment A.

Cyanide Solution

The cyanide solution waste stream is generated from spent process solutions relating to electroplating operations. Representative Pratt & Whitney process solutions have been identified and the applicable MSDSs for the solutions have been reviewed. Copies of these MSDSs are presented as Attachment B. No Appendix VIII constituents beyond the proposed analytical parameter list have been identified.

COMMENT 2

Analytical results from ceiling wipe sampling will function as the quantitative criteria for the determination that non-porous ceiling surfaces cleaned by hydroblasting are decontaminated properly. The approach, sample methodology and data evaluation are described in detail as follows:

Approach

As specified in Section 2.0 of the closure plan, hydroblasting of the ceiling will be the method employed to decontaminate the ceiling in the building formerly housing a portion of the incinerator train. Hydroblasting will proceed to the plastic sheeting barrier which separates the incinerator closure activities from the active wax/solvent storage area.

The ceiling area included during closure activities totals approximately 1100 square feet. An additional 550 square feet of ceiling area is present outside of the decontamination area. This area is considered separate from all closure activities and representative of ambient background conditions within the building.

A total of six discrete sample locations are proposed based on a systematic sampling grid presented as Attachment C. Four of the sample locations are present within the hydroblasting area. Analytical results for these samples will be used to evaluate the decontamination effort. Two sample locations are present outside of the hydroblasting area. Analytical results for these samples will represent background conditions removed from the hydroblasting; therefore, these results will function as the closure performance standard for non-porous surface decontamination.

Each sample will be analyzed for the compounds presented in Table 2 of Section 7.0 of the closure plan. Quality assurance/quality control measures proposed for wipe sampling activities will include the analysis of field blanks and trip blanks.

Sample Methodology

A matrix and constituent specific sample methodology has been developed for ceiling wipe sampling activities. This methodology has been formulated following the review of existing wipe sampling methodologies and the proposed analytical parameter list in the closure plan.

A total of three 100 cm^2 areas will be included at each sample location. The three areas have been segregated based on the analytical parameter list for volatile organic compounds, cyanide and metal compounds. The areas to be included during sample collection will be defined by a 100 cm^2 template. Magnets will be used to secure the template to the ceiling surface.

The wipe medium will consist of 0.8 micron glass fiber filters supplied by the laboratory. Clean, laboratory supplied, disposable latex gloves will be used at each sample location. The wipe extraction solvent will be unique for each template at a given sample location. A description of the sequence of sampling is presented below.

- The wipe area designated for volatile organic compounds will be sampled first. The 100 cm^2 template will be positioned over this area and a total of three wipes will be conducted. Two of the wipes will utilize an extraction solvent and the third wipe will be dry. The extraction solvent will be laboratory supplied methanol furnished in a wide mouth glass jar. Wipe #1 will be dipped into the methanol using a dedicated pair of stainless steel tweezers. The area within

the template is wiped and the wipe is immediately placed into a wide mouthed sample jar with a teflon lined cap. The cap will be temporarily secured to the sample jar to limit exposure to the atmosphere. Wipe #2 will be performed exactly as the first. Wipe #3 is used dry to absorb any methanol left within the template sample area. This final wipe will also be immediately transferred to the same jar as wipes #1 & #2.

The wipe area designated for cyanide will be sampled second. A new template will be positioned adjacent to the volatile organic compound sample area. The procedure for cyanide sampling is the same as for volatile organic compounds; however, the extraction solvent during wet wipe sampling will consist of a caustic solution comprised of 3.0 milliliters of 20% caustic solution to two liters of laboratory supplied distilled water.

The wipe area designated for metals will be sampled last. A new template will be positioned adjacent to the cyanide and volatile organic compound areas. The procedure for metals sampling is the same as for volatile organic compounds; however, the extraction solvent used during wet wipe sampling will consist of an acidic solution comprised of 8.0 milliliters of 1-1 nitric acid to 2 liters of laboratory supplied distilled water. In addition, plastic tweezers will be used to dip the wipe into the extraction solvent.

The field quality assurance/quality control program will consist of a field blank and a trip blank. The field blank will be collected in the same manner as field samples; however, the wipes will simply be exposed to the atmosphere and immediately transferred to the sample jars. The trip blank will consist of laboratory supplied dionized water in a 40 milliliter glass vial with a teflon lined cap. This sample will accompany the sample jars to and from the laboratory.

Immediately following sample collection, each sample will be labelled and placed in an iced cooler. The samples will be transported under full chain-of-custody to a State of Connecticut approved laboratory.

Data Evaluation

Analytical results for wipe samples will be reported as the mass of constituent tested per unit sample area (100 cm^2). The internal laboratory QA/QC program will consist of customary laboratory precision controls and matrix spike sample analysis. The matrix spike sample will consist of one wipe sample set in which each wipe fraction is spiked with a known concentration of a specified contaminant. The sample will then be analyzed to determine the percent recovery of the known contaminant.

Initially, sample data will be evaluated through data validation procedures. Data points that are not supported by the QA/QC procedures will be referred to the sampling team and/or laboratory for appropriate corrective actions.

Upon completion of data validation, the results will be compared to background data points and to the established laboratory method detection limits. Decontamination of the ceiling will be deemed complete if analytical results in the hydroblasting area fall below the method detection limits (non-detectable). If any parameter is quantified above the method detection limit but below the background sample concentration for that parameter then decontamination is deemed complete. If any parameter is quantified above the method detection limit and above the background sample concentration for that parameter then decontamination is deemed incomplete and must continue until subsequent sampling results meet the background sample concentrations.

COMMENT 3

Concrete chip sampling procedures are referenced in Section 10.0 of the closure plan (page 13). The fifth paragraph, fourth sentence of this section will be changed to read "A chisel will be used to dislodge the concrete chips".

COMMENT 4

This observation is correct. The word "equipment" will be added to the 3rd paragraph, 4th sentence of Section 3.0.

COMMENT 5

Review of available manufacturer's specifications indicates the casing construction of the incinerator combustion chamber is double walled with an inner steel wall and an outer stainless steel wall. The interstitial space between the two walls totals approximately three inches. This air space is isolated to form a forced air distribution jacket for external skin cooling.

COMMENT 6

As stated in Section 7.0 of the closure plan, all rinsates generated during incinerator closure activities will be collected and treated as a hazardous waste at Pratt & Whitney's Concentrated Waste Treatment Plant. An expanded discussion of our proposed rinsate handling is presented below.

All rinsate generated during incinerator closure activities will be collected in portable hazardous waste storage containers provided by the CWTP. Accumulated liquids will then be transferred to stationary storage containers currently operated by the CWTP. The rinsates from the cyanide waste feed line decontamination and hydroblasting operations will be stored together. The accumulated liquid will ultimately be vendored off to a RCRA permitted facility for final treatment. The rinsate generated from the blended oil waste feed line decontamination will be stored separately. This liquid will ultimately be vendored off to a RCRA permitted facility for final disposal (incineration).

The CWTP will only function as the interim storage facility prior to vendor disposal. No rinsates will be disposed of at the CWTP. In addition, no rinsates will be discharged under the CWTP's NPDES permit.

COMMENT 7

Yes, a secure landfill disposal facility refers to a RCRA permitted disposal facility.

COMMENT 8

The current layout of incinerator train components is depicted in the closure plan as Appendix B, Figure 3. The components can be segregated into three distinct areas of which two areas are outside of the building. For incinerator train components inside the building, a safe perimeter will be established at the building entrance. For incinerator train components outside of the building, the safe perimeter will be a minimum of fifteen feet on all sides of the equipment. This perimeter will be marked using plastic barricade tape.

The final Site Health and Safety Plan will address this issue and provisions will be incorporated to account for incinerator train components located outside of the building.

We are eager to begin closure activities promptly upon final closure plan approval. In anticipation of this approval, we are currently identifying the qualified contractors necessary to perform these specialized closure activities.

If you have any questions or comments regarding the enclosed, please contact Scott Singer at (203) 565-2016.

Sincerely,

John G. Whitehead
Plant Manager

SLS/JGW/bab

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